

### **REMARKS**

Applicant gratefully acknowledges Supervisory Patent Examiner Knight and Examiner Kennedy for taking time from their busy schedule on May 16, 2007, to conduct a telephone interview with Applicant's representative, as discussed in more detail below.

Entry of this Amendment is believed proper under 37 CFR §1.116, since Applicant believes that the only claim amendments are those necessary to place the claims into condition for immediate allowance rather than proceed to an Appeal, in accordance with the discussion during this telephone interview.

Claims 1, 4-18, 22, and 26 are all the claims presently pending in the application. Claims 23 and 24 were previously canceled, and claims 2, 3, 19, 21, and 25 are canceled above.

It is noted that Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-18, 20-22, 25, and 26 stand rejected under 35 U.S.C. § 101 as allegedly directed to nonstatutory subject matter. Claims 1-18, 20, 22, 25, and 26 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by newly-cited US Patent Application Publication U.S. 2003/0220777 to Kitchen et al.

Per paragraph 9 on page 21 of the Office Action mailed on February 21, 2007, claims 19 and 21 stand as allowable over the prior art of record if rewritten in independent format and the non-statutory subject matter rejection could be overcome.

These rejections are respectfully traversed in the following discussion, further in view of the telephone interview mentioned above.

#### **I. THE CLAIMED INVENTION**

As exemplarily defined by independent claim 1, the claimed invention is directed to a predictive model method. First input data is received into an initial model to develop an initial model output. Second input data and the initial model output are received as inputs into a first boosting stage to develop an improvement to the initial model output, the second input data comprising one of the first input data, data not included in the first input data, and a combination thereof. A model output is output, as resulting from a final boosting stage being one of: the first

boosting stage; and a final one of boosting stages successively receiving model output data from a preceding boosting stage.

As explained in the second full paragraph on page 18, the conventional methods of segmented regression using tree-based predictive modeling has a problem in that data is quickly exhausted in the method of dividing data into numerous subsets.

In contrast, the present invention provides a method that provides an accurate model that converges quickly even with limited amounts of data. A key feature of the present invention that permits it to overcome the deficiency of lack of data is the technique of providing, as an input into the second stage, both input data and the result of the first stage, thereby achieving a boost effect not present in the conventional method.

## **II. THE TELEPHONE INTERVIEW**

Applicant's representative acknowledges the courtesies extended by SPE Knight and Examiner Kennedy in the telephone interview dated May 16, 2007, wherein Applicant approached the USPTO with an attempt to expedite prosecution by determining what might be necessary to proceed to an immediate allowance rather than continue with an appeal at this time, particularly given that claims 19 and 21 were identified as being allowable if rewritten in independent format.

Applicant's representative started out by pointing out that, relative to the method claims, Applicant believes that the statutory subject matter requirement was clearly met in the present application because the present invention describes the real-world application of interacting with a database. As best understood by Applicant's representative during the telephone interview, SPE Knight did not disagree with this characterization of the present invention. Nor did SPE Knight contest that such application is sufficient to pass muster for the statutory subject matter evaluation that the present invention is directed to a practical application even if it does have some underlying mathematics to achieve its practical result.

Therefore, Applicant's representative submitted that, given that claims 19 and 21 were indicated as being allowable if rewritten in independent format, all claims should be allowable if all independent claims included description corresponding to either of allowable claims 19 and 21 and independent claim 25 were to be canceled to permit the remaining claims to pass to

allowance. Accordingly, Applicant believes that the above claim amendments are sufficient to place all remaining claims into condition for an immediate allowance.

The Examiners did, however, express concern about the wording of the Beauregard claims 20 and 21 in view of the description in the specification. To address the Examiners' concerns, Applicant's representative agreed to change the claim wording from "signal-bearing medium" to "computer-readable medium" and to cancel the wording beginning in the final two lines of page 56 of the specification: "... *or other suitable signal-bearing media including transmission media such as digital and analog and communication links and wireless.*"

### **III. THE 35 USC §101 REJECTION**

Claims 1-18, 20-22, 25, and 26 stand rejected under 35 U.S.C. §101 as allegedly directed toward nonstatutory subject matter. The Examiner alleges in the Office Action mailed on February 22, 2007, that: "*In particular claims 1-18, 20-22, and claims 25-26 are considered to be directed to software and in accordance with ... claims do not set forth any structure whereby the functionality of the software may be realized .... Furthermore, claims 1-18, 20-22, and 25-26 do not set forth a "useful, concrete and tangible result." In particular, it is not considered that these claims set forth a tangible result. Claims 1-18, 20-22 and 25-26 do not produce a practical real world result. The Examiner takes the position that while, it is clear from applicant's claims and disclosure, that the intended invention is a predictive modeling method. However, the applicant has failed to include an intended real world use (i.e., an application of the invention), a concrete result and tangible result (of the output).*"

In response, as discussed during the above-described telephone interview, Applicant again submits that the basis of this rejection seems contrary to the evaluation described in the "Interim Guidelines" that statutory subject matter relates to a threshold evaluation of the invention as a whole, including the description of utility in the disclosure.

Relative to the process claims, the relatively recent *State Street* and *AT&T* cases (as well as the "Interim Guidelines") confirm that such claims are directed toward statutory subject matter if the result achieved is "useful, concrete and tangible", and Applicant submits that data mining clearly provides such result, as described in the disclosure at, for example, the first paragraph of page 2 through the third paragraph on page 3, wherein is mentioned non-limiting

applications for direct-mail targeted-marketing, default on loans, insurance, and Internet advertising.

In the latest rejection wording, the Examiner states: *“The examiner takes the position that while, it is clear from applicant’s claims and disclosure, that the intended invention is a predictive modeling method. However, the applicant has failed to include an intended real world use (i.e., an application of the invention), a concrete result and tangible result (of the output).”*

As best understood from this statement, the Examiner is confusing a number of terms and is actually attempting to revise the current Guidelines as implying that independent claims must identify a specific application before the claimed invention is considered statutory subject matter.

Applicant respectfully disagrees and brings the Examiner’s attention to the following wording in Section IV.C of the Guidelines: *“While abstract ideas, natural phenomena, and laws of nature are not eligible for patenting, methods and products employing abstract ideas, natural phenomena, and laws of nature to perform a real-world function may well be. In evaluating whether a claim meets the requirements of section 101, the claim must be considered as a whole to determine whether it is for a particular application of an abstract idea, natural phenomenon, or law of nature, rather than for the abstract idea, natural phenomenon, or law of nature itself.”* (emphasis in the Guidelines itself)

Thus, as best understood from the Examiner’s wording recited above, in view of the above-recited wording from the Guidelines, the real issue that seems to be on the Examiner’s mind is whether a “predictive modeling method” is itself a “real-world function” (as required by the Guidelines and as Applicant submits) or is merely an “an abstract idea” that is devoid of a real-world function until the independent claims recite that the predictive modeling method is applied to specific ones of the uses exemplarily identified in the disclosure (e.g., direct-mail targeted-marketing, default on loans, insurance, and Internet advertising).

In response, Applicant submits that the exemplary uses (e.g., direct-mail targeted-marketing, default on loans, insurance, and Internet advertising) identified in the disclosure are exemplary intended uses of the predictive modeling method and that intended uses are traditionally not considered by the USPTO as appropriate as the sole basis for patentability.

More important, as explained during the above-mentioned telephone interview, Applicant

respectfully submits that claimed predictive modeling method is itself the particular practical application or “real-world function” that the Guidelines require. That is, the specific method described by the present invention for predictive modeling, as implemented on a computer, receives actual real-world data related to an actual real-world problem and outputs a predictive model for that real-world problem. The present invention is, therefore, inherently not an abstract idea, even if it can be reasonably asserted that the claimed model method implements various combinations of abstract concepts and mathematical algorithms.

Stated slightly differently, even if the present invention can be said to rely upon various underlying abstract concepts, the present invention itself, as implemented in a computerized method, inherently implements these abstract concepts as concrete embodiments of these abstract ideas that receive actual data of a real-world problem and provides an actual model of that input data.

The present invention is not attempting to claim these underlying abstract ideas either in the abstract or outside the real-world function of predictive modeling.

Therefore, again, Applicant respectfully submits that the fundamental deficiency of the statutory subject matter of the present evaluation is that the claimed invention is not a “predictive model method” as an abstract idea. Rather, it is a real-world implementation on a computer of a specific embodiment of “predictive model methods”, as defined by its unique combination of method steps. Moreover, since the claimed invention uses real-world data, it inherently provides a real-world model of that data, thereby providing a real-world function.

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

#### **IV. THE PRIOR ART REJECTION**

The Examiner alleges that newly-cited Kitchen et al. (US Patent Publication No. 2003/0220777), teaches the claimed invention described by claims 1-18, 20, 22, 25, and 26.

Applicant respectfully submits, however, that there are elements of the claimed invention which are neither taught nor suggested by Kitchen. However, as indicated during the telephone interview dated May 16, 2007, Applicant wishes to permit the subject matter indicated as being allowable to pass to immediate allowance rather than proceed to an appeal at this point.

Applicant believes that the above claim amendments render this rejection moot by incorporating allowable subject matter into all independent claims. However, it is noted that Applicant is not conceding that the prior art rejection currently of record is proper and reserves the right to file a continuation for the subject matter of the rejected claims, if desired.

## V. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1, 4-18, 22, and 26, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,



Date: May 21, 2007

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### CERTIFICATION OF TRANSMISSION

I certify that I transmitted via EFS this second Amendment under 37 CFR §1.116 to Examiner A. Kennedy on May 21, 2007.



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